

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

GENERAL ADJUSTMENTS IN)
ELECTRIC RATES OF) CASE NO.
KENTUCKY POWER COMPANY) 2005-00341

RECEIVED

JAN 9 2006

PUBLIC SERVICE
COMMISSION

DIRECT TESTIMONY
AND EXHIBITS
OF
RICHARD A. BAUDINO

ON BEHALF OF THE
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

JANUARY 2006

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

GENERAL ADJUSTMENTS IN)	
ELECTRIC RATES OF)	CASE NO.
KENTUCKY POWER COMPANY)	2005-00341

TABLE OF CONTENTS

I. QUALIFICATIONS AND SUMMARY	1
II. REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS	5
III. DETERMINATION OF FAIR RATE OF RETURN	12
Discounted Cash Flow Method	15
Capital Asset Pricing Model.....	24
Conclusions and Recommendations	32
IV. RESPONSE TO COMPANY WITNESS MOUL.....	37
Mr. Moul's Fundamental Risk Analysis.....	40
DCF Analysis.....	42
Risk Premium Analysis	48
CAPM Analysis.....	50
Comparable Earnings	52

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

GENERAL ADJUSTMENTS IN)	
ELECTRIC RATES OF)	CASE NO.
KENTUCKY POWER COMPANY)	2005-00341

DIRECT TESTIMONY OF RICHARD A. BAUDINO

1

I. QUALIFICATIONS AND SUMMARY

2 **Q. Please state your name and business address.**

3

4 A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates,
5 Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia
6 30075.

7

8 **Q. What is your occupation and by whom are you employed?**

9

10 A. I am a utility rate and economic consultant holding the position of Director of
11 Consulting with the firm of Kennedy and Associates.

12

13 **Q. Please describe your education and professional experience.**

1 A. I received my Master of Arts degree with a major in Economics and a minor in Statistics
2 from New Mexico State University in 1982. I also received my Bachelor of Arts Degree
3 with majors in Economics and English from New Mexico State in 1979.

4
5 I began my professional career with the New Mexico Public Service Commission Staff
6 in October of 1982 and was employed there as a Utility Economist. During my
7 employment with the Staff, my responsibilities included the analysis of a broad range of
8 issues in the ratemaking field. Areas in which I testified included cost of service, rate of
9 return, rate design, revenue requirements, analysis of sale/leasebacks of generating
10 plants, utility finance issues, and generating plant phase-ins.

11
12 In October 1989 I joined the utility consulting firm of Kennedy and Associates as a
13 Senior Consultant where my duties and responsibilities covered substantially the same
14 areas as those during my tenure with the New Mexico Public Service Commission Staff.

15 I became Manager in July 1992 and was named to my current position in January 1995.

16

17 Exhibit ____ (RAB-1) summarizes my expert testimony experience.

18

19 **Q. On whose behalf are you testifying?**

20

1 A. I am testifying on behalf of the Kentucky Industrial Utility Customers, Inc.
2 (“KIUC”).
3

4 **Q. What is the purpose of your Direct Testimony?**

5
6 A. The purpose of testimony is to address return on equity for Kentucky Power (“KPCo” or
7 “Company”). I will also respond to the return on equity recommendation proffered by
8 the Company’s witness Mr. Paul Moul.
9

10 **Q. Please summarize your recommendation.**

11
12 A. I recommend that the Kentucky Public Service Commission (“KPSC” or “Commission”)
13 adopt an allowed return on equity for KPCo of 9.35%. My recommendation is consistent
14 with current capital market requirements and with the prevailing environment of low
15 interest rates.
16

17 Further, I recommend that the Commission reject Mr. Moul’s recommended return on
18 equity of 11.50%. As I will demonstrate later in my testimony, Mr. Moul’s
19 recommendation overstates the investors’ required rate of return for Kentucky Power.
20

21 **Q. How is your testimony organized?**

1

2 A. Section II provides a summary of past and current economic conditions, which sets the
3 backdrop for my rate of return analysis. Section III contains a discussion of my
4 approach to estimating the cost of equity and the results of the methodologies that I
5 utilize. Section IV contains my response to the Direct Testimony of Mr. Moul.

1 **II. REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS**

2
3
4 **Q. Please describe the general economic trends that have affected utilities in the last few**
5 **years.**

6
7 A. The trend for the stock and bond markets was quite positive through the '90s. Although
8 there was a recession in late 1990 through early 1991, the markets posted strong, above
9 average gains through 1999. During the period from 1990 - 1999, the S&P 500 posted an
10 average annual return of 18.2%, well above the long-term average stock market return of
11 12.4%¹. Long-term government bonds also provided excellent returns during the '90s,
12 averaging 8.8% per year compared to the long-run average of 5.8%. During the 1990s,
13 inflation remained moderate, averaging 2.9%.

14
15 In the years from 2000 - 2004, the stock and bond markets substantially diverged. Large
16 company stocks as measured by the S&P 500 produced a negative annual return of -2.3%,
17 while small company stocks actually did quite well, posting a compound annual return of
18 14.3%. Long-term corporate and government bonds also performed well, with annual
19 compound returns of 10.7% and 10.3%, respectively. Inflation averaged a moderate 2.5%
20 per year during this period.

21
22 The year 2004 was generally a good one for stocks, bonds, and the economy as a whole.
23 Ibbotson Associates reported that both small and large company stocks saw gains during
24 the year, posting annual returns of 18.39% and 10.87%, respectively. Long-term corporate

1 ¹ *Stocks, Bonds Bills, and Inflation 2005 Yearbook*, Ibbotson Associates, pages 19 and 33.

1 and government bonds also posted returns that were greater than long-term historical
2 returns. U.S. Gross Domestic Product grew at a rate of 4.4% for 2004, compared with
3 3.0% for 2003. The unemployment rate fell from 5.7% in 2003 to 5.4% in 2004, while
4 inflation rose 3.26%. With respect to monetary policy, the Federal Reserve raised its
5 federal funds rate five times during 2004 and ended the year at 2.25%.²

6
7 So far in 2005, Value Line³ reported that for the week ending December 23, the S&P 500
8 index rose a moderate 5.4% over the prior 12-month period. Inflation as measured by the
9 Consumer Price Index – Urban was up 3.5% for November 2005, according to the Bureau
10 of Labor Statistics. The unemployment rate stood at 5.0% at the end of November. Value
11 Line noted that the Federal Reserve continued to increase interest rates, raising the federal
12 funds rate 13 times since mid-2004. As of December 23, 2005, the federal funds rate
13 stood at 4.25%, a 200 basis point increase from the end of 2004.

14
15 **Q. What has the trend in capital costs been over the last few years?**

16
17 A. Exhibit____(RAB-2) presents a graphic depiction of the trend in interest rates from
18 January 1995 through November 2005. The interest rates shown are for the 20-year U.S.
19 Treasury Bond and the average public utility bond from the Mergent Bond Record.
20 Exhibit____(RAB-2) shows that the yields on long-term treasury and utility bonds have
21 declined significantly since early 1995, although rates have been quite volatile. Increased

2 *Stocks, Bonds, Bills, and Inflation 2005 Yearbook*, Ibbotson Associates, pages 9 and 17 – 18.

3 Value Line Investment Survey *Selection and Opinion*, December 23, 2005.

1 bond market volatility actually began in the early 1970s, when inflation became more of a
2 sustained long-term concern.

3
4 Yields have trended downward from 2002 through 2005, with the 20-year bond yield
5 declining from 5.69% to 4.83% at the end of November 2005. The yield on the average
6 public utility bond also decreased significantly over the last three years, falling from 7.83%
7 in March 2002 to 5.88% in November 2005, a decline of 195 basis points. Public utility
8 bond yields fell far more than long-term Treasury yields during this time.

9
10 Current bond yields are either at or near their lowest levels in recent history.
11 Exhibit____(RAB-2) shows that since 1995 public utility bond yields are at their lowest
12 level over that ten-year historical period. I also reviewed the Mergent *Public Utility*
13 *Manual* and found that average public utility bond yields have not been as low as they are
14 now since the 1968 – 1969 time period, almost 36 years ago.

15
16 As I noted earlier, the Federal Reserve began to raise short-term interest rates in 2004. As
17 a result, short and medium term interest rates have risen over the last two years. However,
18 longer term interest rates have been relatively stable since 2004 and have even declined.
19 At the beginning of 2004, the average public utility bond yield was 6.23%, compared with
20 5.88% in November 2005. Likewise, the 20-year Treasury bond yield was 5.01% in
21 January 2004 and at the end of November 2005 stood at 4.83%. Currently, Moody's
22 reported that as of December 23, 2005, the average public utility bond yield was 5.73%
23 and the December 2005 long-term Treasury bond yield was 4.73%, according to Federal
24 Reserve data.

1

2 **Q. Mr. Baudino, in your opinion what effect does the current interest rate environment**
3 **have on utility stocks?**

4

5 A. In my view, low current bond yields strongly suggest lower return on equity requirements
6 on the part on the investing public. The results of my return on equity analysis in the
7 subsequent section of my Direct Testimony are consistent with these historically low bond
8 yields.

9

10 **Q. In 2003, Congress enacted a change in tax policy that lowered the tax rate on**
11 **dividends and capital gains. Please explain the effect of this tax change on utility**
12 **common stocks and on investor required returns for utilities.**

13

14

15 A. Other things being equal, the dividend tax rate reduction means that investors should
16 require lower pre-tax rates of return for utilities. This is because the after-tax dividend
17 streams have now become more valuable due to the reduction in federal taxation. Thus,
18 for a given stock price investors will discount the future dividend payments at a lower
19 return on equity. The stock prices that I use in my cost of equity analyses fully
20 incorporate the effects of this change in tax rates and on the expected returns for
21 utilities. This also means that investors require *lower* risk premiums for stocks
22 compared to utility bonds.

23

1 **Q. How does the investment community regard the electric utility industry as a whole?**

2 **A.** The March 4, 2005 Value Line profile of the electric utility industry (east) noted the
3 following:

4
5 **“For a period of several years, beginning in the mid-1990s, many electric**
6 **utilities eschewed dividend increases in favor of investing in nonregulated**
7 **operations or M&A activity with another utility ... Many of these**
8 **nonregulated investments turned sour, or time proved that some of the**
9 **acquiring utilities in mergers had overpaid. As a result, some companies had**
10 **little choice but to cut or suspend their common dividends.**

11
12 **Utilities began to take another look at raising the dividend after the federal**
13 **government cut the tax rate on dividends in 2003. Some were still getting**
14 **their finances in order as part of their “back to basics” strategies, so**
15 **noteworthy dividend boosts didn’t start to occur until 2004.**

16
17 * * * *

18
19 **The good news of dividends has continued in early 2005. A few companies**
20 **that cut or suspended the dividend in the late 1990s or early 2000s have**
21 **reinstated it, increased it, or stepped up the growth rate.”**

22
23 The April 1, 2005 Value Line profile of the electric utility industry (central) noted the
24 following:

25
26 **“...utility profits slumped in 2002. This was due largely to unsuccessful**
27 **investments abroad and overbuilding domestically. These missteps resulted**
28 **in heavy write-offs, weakened capital structures, and debt rating reductions**
29 **by major rating organizations. Starting in 2003, managements began taking**
30 **steps to reverse course. Overseas assets were sold and plant construction was**
31 **scaled back. That began a profit rebound. By the end of 2004, most previous**
32 **mistakes had been overcome, and 2005 began with a relatively clean slate.”**
33

1 On October 25, 2005, Standard and Poor's published an article entitled "Hurricanes,
2 Mergers Drive U.S. Utility Rating Actions in Third Quarter." S&P noted that the principle
3 drivers of rating changes for U.S. utilities were the recent Gulf Coast hurricanes and
4 merger and acquisition activity. S&P noted that the outlook for regulated utilities remains
5 relatively stable and that much of the industry is reemphasizing its "core competencies",
6 although this is not without its own risks.

7
8 Value Line's November 11, 2005 profile of the electric utility (west) companies noted that
9 the Value Line Utility Average was down 7% since its October peak, likely reflecting
10 investors' concerns over higher interest rates and partly due to a general correction of
11 utility share prices.

12
13 **Q. What conclusions do you draw from Value Line's and S&P's comments regarding**
14 **the state of the electric industry today?**

15
16 **A.** In my opinion, it appears that the electric industry is entering a more stable, less risky
17 environment than it experienced during the last few years. Companies that focus on core
18 electric operations will be lower risk than those with unregulated and/or deregulated
19 operations and investments.

20
21 **Q. Mr. Baudino, how does the investment community view Kentucky Power?**
22

1 A. KPCo currently carries a senior long-term debt rating of BBB from Standard and Poor's
2 and Baa2 from Moody's. Both ratings are investment grade for KPCo's debt.⁴

3

4 Moody's noted in its October 18, 2005 report on the Company that credit strengths
5 included:

6

7 • Mitigation of environmental compliance costs by Kentucky legislation allowing
8 recovery through an environmental surcharge.

9 • Measured approach to deregulation, which isn't expected in the near to
10 intermediate future due to already low rates enjoyed by customers.

11

12 Moody's also noted a credit challenge from potentially large capital expenditures related to
13 environmental compliance.

14

15 Standard and Poor's noted in its September 13, 2005 report on KPCo that its current
16 credit ratings were based on the consolidated credit profile of the parent American
17 Electric Power Company. KPCo's business profile was deemed satisfactory and its
18 financial profile was considered adequate.

19

4 Bond rating reports were provided by the Company in response to KIUC's First Set, Item No. 1.

1 **III. DETERMINATION OF FAIR RATE OF RETURN**

2

3 **Q. Please describe the methods you employed in estimating a fair rate of return for**
4 **KPCo.**

5

6 A. I employed a Discounted Cash Flow ("DCF") analysis for a group of comparison electric
7 companies to estimate the cost of equity for KPCo's regulated electric operations. I also
8 employed several Capital Asset Pricing Model ("CAPM") analyses, although I did not
9 incorporate these results into my recommendation.

10

11 **Q. What are the main guidelines to which you adhere in estimating the cost of equity for**
12 **a firm?**

13

14 A. Generally speaking, the estimated cost of equity should be comparable to the returns of
15 other firms with similar risk structures and should be sufficient for the firm to attract
16 capital. These are the basic standards set out in Federal Power Comm'n v. Hope Natural
17 Gas Co., 320 U.S. 591 (1944) and Bluefield W.W. & Improv. Co. v. Public Service
18 Comm'n., 262 U.S. 679 (1922).

19

20 From an economist's perspective, the notion of "opportunity cost" plays a vital role in
21 estimating the cost of equity. One measures the opportunity cost of an investment equal to
22 what one would have obtained in the next best alternative. For example, let us suppose
23 that an investor decides to purchase the stock of a publicly traded electric utility. That
24 investor made the decision based on the expectation of dividend payments and perhaps
25 some appreciation in the stock's value over time. However, that investor's opportunity cost

1 is measured by what she or he could have invested in as the next best alternative. That
2 alternative could have been another utility stock, a utility bond, a mutual fund, a money
3 market fund, or any other number of investment vehicles.

4
5 The key determinant in deciding whether to invest, however, is based on comparative
6 levels of risk. Our hypothetical investor would not invest in a particular electric company
7 stock if it offered a return lower than other investments of similar risk. The opportunity
8 cost simply would not justify such an investment. Thus, the task for the rate of return
9 analyst is to estimate a return that is equal to the return being offered by other risk-
10 comparable firms. Failing this, the subject firm will be impaired in its ability to attract
11 capital.

12
13 **Q. What are the major types of risk faced by utility companies?**

14
15 **A.** In general, risk associated with the holding of common stock can be separated into three
16 major categories: business risk, financial risk, and liquidity risk. Business risk refers to
17 risks inherent in the operation of the business. Volatility of the firm's sales, long-term
18 demand for its product(s), the amount of operating leverage, and quality of management
19 are all factors that affect business risk. The quality of regulation at the state and federal
20 levels also plays an important role in business risk for regulated utility companies.

21
22 Financial risk refers to the impact on a firm's future cash flows from the use of debt in the
23 capital structure. Interest payments to bondholders represent a prior call on the firm's cash
24 flows and must be met before income is available to the common shareholders. Additional

1 debt means additional variability in the firm's earnings, leading to additional risk.

2

3 Liquidity risk refers to the ability of an investor to quickly sell an investment without a
4 substantial price concession. The easier it is for an investor to sell an investment for cash,
5 the lower the liquidity risk will be. Stock markets, such as the New York and American
6 Stock Exchanges, help ease liquidity risk substantially. Investors who own stocks that are
7 traded in these markets know on a daily basis what the market prices of their investments
8 are and that they can sell these investments fairly quickly. Many electric utility stocks are
9 traded on the New York Stock Exchange and are considered liquid investments.

10

11 **Q. Are there any indices available to investors that quantify the total risk of a company?**

12

13 A. Yes. Published measures exist that categorize companies based on various measures of
14 risk. One of the best-known and most widely available sources is from Value Line. Each
15 company on which Value Line reports is assigned a Safety Rank. The Safety Rank
16 consists of a number from 1 to 5, with 1 being the highest - meaning least risky - and 5
17 being the lowest - meaning most risky. The Safety Rank measures the total risk of a stock
18 and encompasses a wide array of factors that affect financial and business risk. These
19 factors include:

20

- 21 • Stock price volatility
- 22 • Fixed charge coverage ratio
- 23 • Quality of earnings
- 24 • Capitalization ratio
- 25 • Earnings on common stock
- 26 • Payout ratio
- 27 • Regulatory risk

1
2 By selecting companies with the same Safety Rank, investors may rely upon a widely-read
3 third party assessment of which investments are similarly risky.

4
5 Bond ratings are another good tool that investors may utilize to determine the risk
6 comparability of firms. Bond rating agencies such as Moody's and Standard and Poor's
7 perform detailed analyses of factors that contribute to the business and financial risk of a
8 particular investment. The end result of their analyses is a bond rating that reflects these
9 risks.

10
11 **Discounted Cash Flow Method**

12
13 **Q. Please describe the basic DCF approach.**

14
15 **A.** The basic DCF approach is rooted in valuation theory. It is based on the premise that
16 the value of a financial asset is determined by its ability to generate future net cash
17 flows. In the case of a common stock, those future cash flows take the form of
18 dividends and appreciation in price. The value of the stock to investors is the discounted
19 present value of future cash flows. The general equation then is:

20
$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \dots + \frac{R}{(1+r)^n}$$

21 *Where: V = asset value*

1 *R = yearly cash flows*
2 *r = discount rate*

3
4 This is no different from determining the value of any asset from an economic point of
5 view. However, the commonly employed DCF model makes certain simplifying
6 assumptions. One is that the stream of income from the equity share is assumed to be
7 perpetual; that is, there is no salvage or residual value at the end of some maturity date
8 (as is the case with a bond). Another important assumption is that financial markets are
9 reasonably efficient; that is, they correctly evaluate the cash flows relative to the
10 appropriate discount rate, thus rendering the stock price efficient relative to other
11 alternatives. Finally, the model I employ also assumes a constant growth rate in
12 dividends. The fundamental relationship employed in the DCF method is described by
13 the formula:

14
15
$$k = \frac{D_1}{P_0} + g$$

16 *Where: D₁ = the next period dividend*
17 *P₀ = current stock price*
18 *g = expected growth rate*
19 *k = investor-required return*
20

21 It is apparent that the "k" so determined must relate to the investors' expected return.
22 Use of the discounted cash flow method to determine an investor-required return is
23 complicated by the need to express investors' expectations relative to dividends,

1 earnings, and book value over an infinite time horizon. Financial theory suggests that
2 stockholders purchase common stock on the assumption that there will be some change
3 in the rate of dividend payments over time. We assume that the rate of growth in
4 dividends is constant over the assumed time horizon, but the model could easily handle
5 varying growth rates if we knew what they were. Finally, the relevant time frame is
6 prospective rather than retrospective.

7
8 **Q. What was your first step in conducting your DCF analysis for KPCo?**

9
10 A. My first step was to construct a comparison group of companies with a risk profile that
11 is reasonably similar to KPCo. Since the Company is a wholly owned subsidiary of
12 American Electric Power (“AEP”) and does not have publicly traded common stock,
13 KPCo’s cost of equity cannot be estimated directly using the DCF model. As a result, it
14 is necessary to construct a group of comparison companies that has a risk profile that is
15 reasonably similar to Kentucky Power.

16
17 **Q. Please describe your approach for selecting a comparison group of electric**
18 **companies.**

19
20 A. I used several criteria to select a comparison group. First, using the December 2005 issue
21 of the *AUS Utility Reports*, I selected electric companies that were rated either Baa/BBB or

1 Baa/BBB/A by Moody's and Standard and Poor's. From that group I selected companies
2 that had at least 50% of their revenues from electric operations. This resulted in a group of
3 electric and/or electric and gas companies that have operational and risk profiles similar to
4 KPCo.

5
6 From this group, I then eliminated companies that had cut or eliminated dividends in the
7 last two years, were recently or currently involved in merger activities, and had recent
8 experience with significant earnings fluctuations. These criteria are important because
9 utilities that are undergoing those types of changes are not good candidates for the DCF
10 model.

11
12 The resulting group of comparison electric companies I used in my analysis is:

- 13
14 1. Avista Corporation
15 2. Cleco Corporation
16 3. DPL, Inc.
17 4. Duquesne Light Holdings
18 5. Empire District Electric
19 6. Energy East Corp.
20 7. First Energy Corporation
21 8. Green Mountain Power
22 9. Hawaiian Electric Industries
23 10. Northeast Utilities
24 11. Pinnacle West Capital Corp.
25 12. PNM Resources
26 13. PPL Corporation
27 14. Progress Energy
28 15. Puget Energy
29 16. UniSource Energy Corp.

1

2 **Q. What was your first step in determining the DCF return on equity for the**
3 **comparison group?**

4

5 A. I first determined the current dividend yield, D_0/P_0 , from the basic equation. My general
6 practice is to use six months as the most reasonable period over which to estimate the
7 dividend yield. The six-month period I used covered the months from July through
8 December 2005. I obtained historical prices and dividends from Yahoo! Finance and the
9 S&P Stock Guide. The annualized dividend divided by the average monthly price
10 represents the average dividend yield for each month in the period.

11

12 The resulting average dividend yield for the group is 4.03%. These calculations are shown
13 in Exhibit ____ (RAB-3).

14

15

16 **Q. Having established the average dividend yield, how did you determine the expected**
17 **growth rate for the electric comparison group?**

18

19 A. "Expected" refers to the investor's expected growth rate. The task, in theory, is to use a
20 growth rate that will correctly forecast the constant rate of growth in dividends. We refer
21 to a perpetual growth rate since the DCF model has no arbitrary cut-off point. The obvious

1 fact is that there is no way to know with absolute certainty what investors expect the
2 growth rate to be in the short term, much less in perpetuity. The dividend growth rate is a
3 function of earnings growth and the payout ratio, neither of which is known precisely for
4 the future.

5
6 In this analysis, I relied on three major sources of analysts' forecasts for growth. These
7 sources are Value Line, Zacks Investment Research ("Zacks"), and First Call/Thomson
8 Financial.

9
10 **Q. Please briefly describe Value Line, Zacks, and First Call/Thomson Financial.**

11
12 **A.** Value Line is an investment survey that is published for approximately 1,700 companies,
13 both regulated and unregulated. It is updated quarterly and probably represents the most
14 comprehensive and widely used of all investment information services. It provides both
15 historical and forecasted information on a number of important data elements. Value Line
16 neither participates in financial markets as a broker nor works for the utility industry in any
17 capacity of which I am aware.

18
19 According to Zacks' website, Zacks "was formed in 1978 to compile, analyze, and
20 distribute investment research to both institutional and individual investors." Zacks
21 gathers opinions from a variety of analysts on earnings growth forecasts for numerous

1 firms including regulated electric utilities. The estimates of the analysts responding are
2 combined to produce consensus average and median estimates of earnings growth.

3

4 Like Zack's, First Call/Thomson Financial also provides detailed investment research on
5 numerous companies. First Call/Thomson also compiles and reports consensus analysts'
6 forecasts of earnings growth.

7

8 **Q. Why did you rely on analysts' forecasts in your analysis?**

9

10 A. The finance literature has shown that analysts' forecasts provide better predictions of future
11 growth than do estimates based on historical growth alone⁵.

12

13 **Q. How did you utilize your data sources to estimate growth rates for the comparison**
14 **group?**

15

16 A. Exhibit____ (RAB-4), pages 1 and 2, presents the details of the calculations for the Value
17 Line, Zacks, and First Call/Thomson Financial forecasted growth estimates. The Value
18 Line growth estimates are based on five-year forecasts for dividend growth and six-year

5 See Rozeff (*Journal of Forecasting*, Volume 2, Issue No. 4, 1983), Brown and Rozeff (*Journal of Finance*, March 1978), Moyer, Chatfield and Kelley (*International Journal of Forecasting*, 1985), and a study by Vander Weide and Carleton that was incorporated as part of the Edison Electric Institute's comments in the Federal Energy Regulatory Commission's generic cost of capital proceedings.

1 forecasts for earnings growth. The Zacks and First Call/Thomson Financial earnings
2 growth estimates are forecasts for the next three to five years. These earnings and
3 dividend growth estimates for the comparison group are summarized on Columns (1)
4 through (5) of page 1 of Exhibit ____ (RAB-4).

5
6 I also utilized the sustainable growth formula in estimating the expected growth rate. The
7 sustainable growth method, also known as the retention ratio method, recognizes that the
8 firm retains a portion of its earnings fuels growth in dividends. These retained earnings,
9 which are plowed back into the firm's asset base, are expected to earn a rate of return.
10 This, in turn, generates growth in the firm's book value, market value, and dividends.

11
12 The sustainable growth method is calculated using the following formula:

13
14
$$G = B \times R$$

15
16 *Where:* *G = expected retention growth rate*
17 *B = the firm's expected retention ratio*
18 *R = the expected return*

19 In its proper form, this calculation is forward-looking. That is, the investors' expected
20 retention ratio and return must be used in order to measure what investors anticipate will
21 happen in the future. Data on expected retention ratios and returns may be obtained from
22 Value Line.

1

2 The expected sustainable growth estimates for the comparison group are presented in
3 Column (3) on page 1 of Exhibit ____ (RAB-4). The data came from the Value Line
4 forecasts for the comparison group.

5

6 **Q. How did you proceed to determine the DCF cost of equity for the electric comparison**
7 **group?**

8

9 A. To estimate the expected dividend yield (D_1) for the group, the current dividend yield must
10 be moved forward in time to account for dividend increases over the next twelve months.
11 I estimated the expected dividend yield by multiplying the current dividend yield by one
12 plus one-half the expected growth rate.

13

14 I then added the expected growth rate ranges to the expected dividend yield for the
15 comparison group. The calculation of the resulting DCF returns on equity is presented on
16 page 3 of Exhibit ____ (RAB-4). The expected growth rates I utilized in this proceeding
17 range from 4.83% to 5.43%. The retention growth method resulted in a growth rate of
18 3.69%, 114 basis points below the low end of this range.

19

20 **Q. Please explain how you calculated your DCF cost of equity estimates.**

21

1 A. Page 3 of Exhibit ____ (RAB-4) shows four alternative DCF cost of equity calculations
2 using four of the growth estimates shown on page 1. The growth rates I used were the
3 Value Line forecasts for dividend and earnings growth and the analysts' forecasts from
4 Zack's and First Call/Thomson Financial.

5

6 The DCF returns range from 8.95% to 9.57%. The DCF return on equity utilizing the
7 average of all four growth rates is 9.34%.

8

9 **Capital Asset Pricing Model**

10

11 **Q. Briefly summarize the Capital Asset Pricing Model ("CAPM") approach.**

12

13 A. The theory underlying the CAPM approach is that investors, through diversified portfolios,
14 may combine assets to minimize the total risk of the portfolio. Diversification allows
15 investors to diversify away all risks specific to a particular company and be left only with
16 market risk that affects all companies. Thus, CAPM theory identifies two types of risks
17 for a security: company-specific risk and market risk. Company-specific risk includes
18 such events as strikes, management errors, marketing failures, lawsuits, and other events
19 that are unique to a particular firm. Market risk includes inflation, business cycles, war,
20 variations in interest rates, and changes in consumer confidence. Market risk tends to

1 affect all stocks and cannot be diversified away. The idea behind the CAPM is that
2 diversified investors are rewarded with returns based on market risk.

3
4 Within the CAPM framework, the expected return on a security is equal to the risk-free
5 rate of return plus a risk premium that is proportional to the security's market, or
6 nondiversifiable risk. Beta is the factor that reflects the inherent market risk of a security.
7 It measures the volatility of a particular security relative to overall market for securities.
8 For example, a stock with a beta of 1.0 indicates that if the market rises by 15.00%, that
9 stock will also rise by 15.00%. This stock moves in tandem with movements in the overall
10 market. Stocks with a beta of 0.5 will only rise or fall 50.00% as much as the overall
11 market. So with an increase in the market of 15.00%, this stock will only rise 7.50%.
12 Stocks with betas greater than 1.0 will rise and fall more than the overall market. Thus,
13 beta is the relevant measure of the risk of individual securities vis-à-vis the market.

14
15 Based on the foregoing discussion, the equation for determining the return for a security in
16 the CAPM framework is:

$$K = R_f + \beta(MRP)$$

17
18
19
20 *Where:* K = *Required Return on equity*
21 R_f = *Risk-free rate*
22 MRP = *Market risk premium*
23 β = *Beta*

1
2 This equation tells us about the risk/return relationship posited by the CAPM. Investors
3 are risk averse and will only accept higher risk if they receive higher returns. These returns
4 can be determined in relation to a stock's beta and the market risk premium. The general
5 level of risk aversion in the economy determines the market risk premium. If the risk-free
6 rate of return is 3.00% and the required return on the total market is 15.00%, then the risk
7 premium is 12.00%. Any stock's required return can be determined by multiplying its beta
8 by the market risk premium. Stocks with betas greater than 1.0 are considered riskier than
9 the overall market and will have higher required returns. Conversely, stocks with betas
10 less than 1.0 will have required returns lower than the market as a whole.

11
12 **Q. In general, are there concerns regarding the use of the CAPM in estimating the**
13 **return on equity?**

14
15 A. Yes. There is considerable controversy surrounding the use of the CAPM⁶. There is
16 strong evidence that beta is not the primary factor in determining the risk of a security. For
17 example, Value Line states that its Safety Rank is a measure of total risk, not its calculated
18 beta coefficient. Beta coefficients usually describe only a small amount of total investment
19 risk. Also, recent finance literature has questioned the usefulness of beta in predicting the

6 For a more complete discussion of some of the controversy surrounding the use of the CAPM, refer to *A Random Walk Down Wall Street* by Burton Malkiel, pages 229 – 239, 1999 edition.

1 relationship between risk and required return. Finally, a considerable amount of judgment
2 must be employed in determining the risk-free rate and market return portions of the
3 CAPM equation. The analyst's application of judgment can significantly influence the
4 results obtained from the CAPM. My past experience with the CAPM indicates that it is
5 prudent to use a wide variety of data in estimating returns. Of course, the range of results
6 may also be wide, indicating the difficulty in obtaining a reliable estimate from the CAPM.

7
8 **Q. How did you estimate the market return portion of the CAPM?**

9
10 A. The first source I used was the Value Line Investment Survey for Windows for December
11 2005. Value Line provides a summary statistical report detailing, among other things,
12 forecasted growth in dividends, earnings, and book value for the companies Value Line
13 follows. I have presented these three growth rates and the average on page 2 of Exhibit
14 ____ (RAB-5). The average growth rate is 12.84%. Combining this growth rate with the
15 average expected dividend yield of the Value Line companies of 1.29% results in an
16 expected market return of 14.13%. The detailed calculations are shown on page 1 of
17 Exhibit ____ (RAB-5).

18
19 I also considered a supplemental check to this market estimate. Ibbotson Associates
20 published a study of historical returns on the stock market in its *Stocks, Bonds, Bills, and*
21 *Inflation 2005 Yearbook*. Some analysts employ this historical data to estimate the market

1 risk premium of stocks over the risk-free rate. The assumption is that a risk premium
2 calculated over a long period of time is reflective of investor expectations going forward.
3 Exhibit ____ (RAB-6) presents the calculation of the market return using the Ibbotson
4 historical data.

5
6 **Q. Mr. Baudino, please comment on the Value Line market return of 14.13%.**

7
8 A. In my opinion, the market return calculation based on Value Line data is greatly
9 overstated. The expected return on the market based on Value Line's most recent forecasts
10 appears to be quite volatile at this time and likely exceeds the long-term expected growth
11 rate for the market. In a piece of return on equity testimony I filed in 2004 for Aquila
12 Networks – WPC, the expected return on the market was 11.70%. Later that year, I filed
13 return on equity testimony for Southwestern Electric Power Company (“SWEPCO”) in
14 which the market return jumped substantially to 13.38%. Now in this proceeding, the
15 Value Line market return jumped once again to 14.13%. This change substantially
16 increased the CAPM results in this proceeding compared to my Aquila and SWEPCO
17 testimonies. However, my DCF results have remained fairly stable and are consistent with
18 interest rates trends throughout 2004 and 2005.

19
20 I conducted an alternative analysis using a forecast of earnings growth for the S&P 500 as
21 a check on the results from the Value Line calculation. First Call's five-year forecast of

1 earnings growth for the S&P 500 is 10.50%. Combining this growth forecast with the
2 current dividend yield on the S&P 500 of 1.84%⁷ results in the following total return on
3 the market:

4

$$5 \quad \text{Market ROE} = 1.94\% + 10.50\% = 12.44\%$$

6

7 As I will show later in my testimony, this estimate of the expected market return is closer
8 to the results based on historical data.

9

10 **Q. Please address the use of historical earned returns to estimate the market risk**
11 **premium.**

12

13 A. The use of historic earned returns on the Standard and Poor 500 to estimate the current
14 market risk premium is rather suspect because it naively assumes that investors currently
15 expect historical risk premiums to continue unchanged into the future forever regardless of
16 present or forecasted economic conditions. Brigham, Shome and Vinson noted the
17 following with respect to the use of historic risk premiums calculated using the returns as
18 reported by Ibbotson and Sinquefeld (referred to in the quote as "I&S"):

19

20

21

**"There are both conceptual and measurement problems with using
I&S data for purposes of estimating the cost of capital. Conceptually,**

7 The S&P dividend yield as of November 30, 2005 was 1.84%.

1 **there is no compelling reason to think that investors expect the same**
2 **relative returns that were earned in the past. Indeed, evidence**
3 **presented in the following sections indicates that relative expected**
4 **returns should, and do, vary significantly over time. Empirically, the**
5 **measured historic premium is sensitive both to the choice of**
6 **estimation horizon and to the end points. These choices are essentially**
7 **arbitrary, yet can result in significant differences in the final**
8 **outcome.”⁸**

9
10 In summary, the use of historic earned returns should be viewed with a great deal of
11 caution. There is no real support for the proposition that an unchanging, mechanistically
12 applied historical risk premium is representative of current investor expectations and
13 return requirements.

14
15 **Q. How did you determine the risk free rate?**

16
17 **A. I used the average yields on the 20-year Treasury bond and five-year Treasury note over**
18 **the six-month period from July through December 2005. The 20-year Treasury bond is**
19 **often used by rate of return analysts as the risk-free rate, but it contains a significant**
20 **amount of interest rate risk. The five-year Treasury note carries less interest rate risk**
21 **than the 20-year bond and is more stable than three-month Treasury bills. Therefore, I**
22 **have employed both of these securities as proxies for the risk-free rate of return. This**
23 **approach provides a reasonable range over which the CAPM may be estimated.**

8 Brigham, E.F., Shome, D.K. and Vinson, S.R., “The Risk Premium Approach to Measuring a Utility’s Cost of Equity”, *Financial Management*, Spring 1985, pp. 33-45.

1

2 **Q. What is your estimate of the market risk premium?**

3

4 A. Exhibit ____ (RAB-5), line 9 of page 1, presents my estimates of the market risk premium
5 based on a DCF analysis applied to current market data. The market risk premium is
6 9.49% using the 20-year Treasury bond and 9.92% using the five-year Treasury bond.

7

8 Using the alternative market return estimate from the S&P 500, the market risk premium
9 is:

10

11
$$12.44\% - 4.64\% = 7.80\% \text{ (20-year bond)}$$

12
$$12.44\% - 4.21\% - 8.23\% = (5\text{-year bond})$$

13

14 Utilizing the historical Ibbotson data on market returns, the market risk premium ranges
15 from 5.20% to 7.20%. This is shown on Exhibit ____ (RAB-6).

16

17 **Q. How did you determine the value for beta?**

18

19 A. I obtained the betas for the companies in the electric company comparison group from
20 most recent Value Line reports. The average of the Value Line betas for the electric group
21 is .83.

1

2 **Q. Please summarize the CAPM results.**

3

4 A. Please refer to line 14 of page 1 of Exhibit ____ (RAB-5) for the CAPM results for the 20-
5 year and five-year Treasury bond yields. For the electric comparison group, the CAPM
6 returns are 12.49% (five-year bond) and 12.56% (20-year bond).

7

8 Using the risk premium from the S&P 500, the CAPM results are:

9

10
$$ROE = 4.64\% + .83 (7.80\%) = 11.11\% (20\text{-year bond})$$

11
$$ROE = 4.21\% + .83 (8.23\%) = 11.04\% (5\text{-year bond})$$

12

13 The CAPM results using the historical Ibbotson data range from 8.98% to 10.64%. These
14 results are shown on Exhibit ____ (RAB-6).

15

16 **Conclusions and Recommendations**

17

18 **Q. Please summarize the cost of equity estimates you have developed up to this point in**
19 **your testimony.**

20

1 A. Utilizing the DCF model, I developed cost of equity estimates for a comparison group of
2 electric utility companies. The results for the electric company comparison group using
3 the constant-growth DCF model ranged from 8.95% to 9.57%. The results using the
4 CAPM ranged from 8.98% to 12.56%.

5

6 **Q. What is your recommendation for a fair rate of return on equity for KPCo?**

7

8 A. My recommended rate of return on equity for the Company is 9.35%. This
9 recommendation is based on the average of the four DCF cost of equity estimates. Given
10 current conditions in the financial markets, I believe 9.35% is a reasonable estimate of the
11 investor-required return on equity for a BBB/Baa-rated company such as KPCo.

12

13 **Q. Your CAPM results are higher than your DCF results. Why didn't you take this**
14 **into account in your recommended return on equity?**

15

16 A. It is my opinion that the CAPM results for the comparison group are overstated at this
17 time. This is due, in part, to the application of Value Line's beta for the group of .83.
18 Value Line determines its betas based on five years of historical price data. Over the last
19 five years, utility share prices in general have been quite volatile due to restructuring,
20 deregulation, and the increase of unregulated investments that were more risky than core
21 electric operations. These factors likely increased the historical betas for electric utilities,

1 other things being equal. It now appears that the industry will be more stable going
2 forward and, in my opinion, historical betas are therefore likely to fall from their current
3 level.

4
5 Secondly, as I mentioned earlier in my testimony, I believe that the CAPM results utilizing
6 the Value Line forecast for market return is greatly overstated. The market return of
7 14.13% is completely out of line with the S&P forecast and with the results based on
8 historical data. I believe that the Value Line forecasts for the next five years exceed long-
9 term expectations for market returns and I recommend that the Commission disregard
10 these results.

11
12 Third, a recent study by Ibbotson and Chen⁹ suggests that the historical risk premiums I
13 presented in Exhibit ____ (RAB-6) may be too high. The Ibbotson/Chen study estimated a
14 revised risk premium that factors out rising price/earnings ("P/E") ratios over time, which
15 served to inflate achieved historical returns. The assumption in this analysis is that P/E
16 ratios would not be expected to rise continuously into the future. The results of the study
17 indicate a revised historical risk premium of 4% to 6%, well below the historical risk
18 premiums of 5.2% - 7.2% shown in Exhibit ____ (RAB-6). Incorporating the lower revised
19 risk premiums would result in CAPM estimates of 7.96% to 9.62%.

20

9 Roger G. Ibbotson and Peng Chen, *Long Run Stock Returns: Participating in the Real Economy*,

1 **Q. In Section II of your Direct Testimony, you mentioned the passage of the 2003 tax bill**
2 **that reduced taxes on qualifying dividends to 15%. Do you believe that this reduced**
3 **tax rate on dividends has affected the investor required returns for electric utilities**
4 **companies?**

5

6 **A.** Yes. As I stated earlier, I believe that the new favorable tax rate on dividends has reduced
7 the investors' required pre-tax cost of equity for electric utilities. Basic economic theory
8 supports this proposition.

9

10 Prior to the passage of the 2003 tax bill, dividends were taxed at the normal tax rates,
11 which could be as high as 35%. These same dividends are now being taxed at a much
12 lower 15% rate. What this means is that for a given after-tax rate of return, such as 7% for
13 example, an investor would now require a lower pretax return in order to earn that 7%
14 after-tax return. In the realm of regulation, experts must estimate, and commissions must
15 set, a pretax rate of return on equity that will be applied to a company's rate base. With
16 lower tax rates on dividends, these pretax returns will inevitably decline.

17

18 In conclusion, other things being equal, the reduction in dividend taxation should lead to
19 lower required returns for investors. When viewed from this perspective, a 9.35% return
20 on equity for KPCo is quite reasonable.

1

2 **Q. Have you compared your recommendation to Mr. Moul's based on the pretax cost of**
3 **equity?**

4

5 A. Yes. Using the Company's tax gross-up factor of 1.6656, my recommended cost of equity
6 on a pretax basis is 15.57%. Mr. Moul's recommended cost of equity on a pretax basis is
7 19.15%. Not only is Mr. Moul's recommended 11.50% overstated, on a pretax basis the
8 overstatement is exacerbated by including the effect of income taxes.

9

IV. RESPONSE TO COMPANY WITNESS MOUL

1
2

3 **Q. Have you reviewed the direct testimony of Kentucky Power witness Mr. Paul Moul?**

4

5 A. Yes. I have reviewed Mr. Moul's direct testimony.

6

7 **Q. Please summarize the results of your review of Mr. Moul's testimony, analyses, and**
8 **cost of equity recommendation.**

9

10 A. Mr. Moul's recommended cost of equity of 11.50% greatly overstates the investor's
11 required return on Kentucky Power's regulated utility operations.

12

13 The areas that contribute to Mr. Moul's overstatement of the cost of equity in this
14 proceeding are as follows:

15

16 1. Mr. Moul's statements regarding the increased risk of the electric utility industry
17 do not justify the increased cost of equity estimate that he recommends. Much of
18 the increased industry risk described by Mr. Moul does not apply to Kentucky
19 Power.

20

21 2. Mr. Moul's electric company group does not provide an adequate basis for
22 estimating the cost of equity for KPCo.

23

24 3. Mr. Moul's emphasis on earnings per share growth results in an excessively high
25 cost of equity estimate for Kentucky Power.

26

27 4. In one of his DCF recommendations, Mr. Moul utilized a 13.75% value for the
28 upper end of the range of DCF estimates. This value is unrepresentative of the

1 majority of results from his alternative DCF method and using 13.75% inflated his
2 DCF cost of equity recommendation.

3
4 5. Mr. Moul's leverage adjustment is unreasonable, inappropriate, and serves to
5 inflate his cost of equity estimate.

6
7 6. Mr. Moul's flotation cost adjustment is inappropriate and should be rejected.

8
9 7. Mr. Moul's use of forecasted interest rates in his Risk Premium and CAPM studies
10 are inappropriate and result in overstated cost of equity estimates.

11
12 8. Mr. Moul's risk premium analysis should be viewed with a good deal of caution.
13 It should not be used as the primary basis for determining the cost of equity in this
14 proceeding.

15
16 9. Mr. Moul's CAPM approach should be rejected. He used an inappropriate beta in
17 his analysis that inflates the end result. Mr. Moul also significantly overstated the
18 market return in his CAPM analysis.

19
20 10. Mr. Moul's Comparable Earnings analysis should be rejected. The results from
21 this analysis are clearly outside the realm of reasonableness for returns on
22 regulated electric utility operations.

23
24
25 **Q. Please address Mr. Moul's position regarding certain risks associated with the**
26 **electric utility industry.**

27
28 A. Beginning on page 5 of his Direct Testimony, Mr. Moul discussed several risk factors
29 that contribute to "increasing competitive risks" in the electric utility industry.

30
31 The first risk Mr. Moul cited was increased costs for compliance with the Clean Air Act
32 ("CAA")(page 5, line 19 through page 6, line 2). This clearly is not a risk at all for
33 Kentucky Power because the Company is allowed to collect its CAA-related costs

1 through a surcharge mechanism, including a current return. Kentucky Power's
2 Environmental Cost Recovery Mechanism ("ECR") virtually eliminates any risk that the
3 Company has relating to collecting its costs associated with CAA compliance. Further,
4 since Kentucky Power is a low-cost utility, these additional CAA costs do not add
5 significant risk that the Company will become less competitive with alternative service
6 providers. Mr. Moul's argument regarding the applicability of this alleged risk to
7 Kentucky Power should be rejected.

8
9 On page 6, lines 2 through 9, Mr. Moul cited risk associated with potential loss of
10 revenues from deregulation and market pricing. This alleged risk is not applicable to
11 Kentucky Power at this time. Kentucky is not currently contemplating retail access for
12 electric customers, so there is no competitive threat from other providers present in the
13 Company's system. Further Mr. Moul did not cite any specific examples of competition
14 that are currently applicable to Kentucky Power.

15
16 **Q. Overall, do any of Mr. Moul's statements regarding increased risk for electric**
17 **utilities justify a higher return on equity for Kentucky Power?**

18
19 **A.** No. In fact, I would argue the contrary point. Since Kentucky Power is a low-cost
20 utility that operates in a state that does not allow retail competition, it does not have the
21 competitive risk that other utilities are facing at this time. Further, all of the risks facing

1 Kentucky Power have been evaluated by rating agencies such and Standard and Poor's
2 and Moody's and are reflected in the Company' current bond rating.

3

4 **Mr. Moul's Fundamental Risk Analysis**

5

6 **Q. Beginning on page 8 of his Direct Testimony, Mr. Moul describes how he**
7 **constructed his comparison group of companies. Do you agree with the Electric**
8 **Group he used to estimate the cost of equity for KPCo?**

9

10 A. No. I believe that the screens I used result in a comparison group that is more
11 appropriate for estimating the cost of equity for KPCo in this proceeding.

12

13 **Q. In Case No. 2002-00169, which was the Company's environmental surcharge**
14 **proceeding, you accepted Mr. Moul's electric group. Why are you rejecting it in**
15 **this case?**

16

17 A. For purposes of KPCo's environmental surcharge case, which was rather narrow in its
18 scope, I was willing to agree with Mr. Moul's electric group even though he used certain
19 criteria for constructing his group that I had not ordinarily used. However, this
20 proceeding is a general rate case in which the Commission will be setting the

1 Company's base rates for the foreseeable future. Thus, I rigorously evaluated Mr.
2 Moul's electric group in this case and found it wanting in several important areas.

3
4 First, several companies have less than half of their revenues coming from regulated
5 electric operations. These companies and the percentage of regulated electric revenues
6 are as follows:

- 7
8 1. DTE Energy – 37%
9 2. Vectren Corp. – 23%
10 3. WPS Resources – 16%

11
12 Second, several companies have bond ratings different from Kentucky Power. Those
13 companies are:

- 14
15 1. Ameren – A-/A2
16 2. Exelon – A-/A2
17 3. MGE Energy – AA-/Aa3
18 4. Vectren – A/A3
19 5. Wisconsin Energy – A-/A1
20 6. WPS Resources – AA-/Aa2

21
22 Third, Mr. Moul limited his group to companies that operate within the Great Lakes
23 region of the U.S. I believe this criterion unnecessarily restricts the sample of electric
24 companies that could be included in a reasonable comparison group. My comparison

1 group, which consists of sixteen utilities from across the United States, provides a more
2 robust basis upon which to estimate the cost of equity.

3

4 Finally, one of his companies, Exelon, is involved in a pending merger with Public
5 Service Enterprise Group. Companies that are involved in mergers are not appropriate
6 candidates for a comparison group because their share prices are influenced by
7 expectations about the pending merger. Further, their growth forecasts are no longer
8 relevant because the merged company will look substantially different from each
9 separate company.

10

11 Given the smaller electric group used by Mr. Moul in this case compared to the group he
12 used in Case No. 2002-00169, the differences in bond ratings, lower percentage of
13 revenues from electric operations, and merger activity of one of the constituents, I
14 believe that my comparison group is a better one to utilize in estimating the return on
15 equity for KPCo in this case.

16

17 **DCF Analysis**

18

19 **Q. Please address Mr. Moul's DCF analyses in this proceeding.**

20

1 A. In his DCF analyses, Mr. Moul relied solely upon earnings growth estimates in
2 formulating his DCF result. In my opinion, it is appropriate to include dividend growth
3 forecasts, which are lower than current earnings growth forecasts, in order to establish a
4 reasonable range of cost of equity estimates for the Commission to consider. I pointed
5 out on pages 9 and 10 of my testimony that dividend payments have assumed greater
6 prominence in recent years. In my opinion, this should factor into investors' future
7 growth expectations.

8
9 Mr. Moul selected an earnings growth forecast of 5.50% for use in his DCF analysis.
10 However, the range of his earnings growth forecasts was from 4.51% to 5.63%. The
11 midpoint of this range is 5.07%. Mr. Moul failed to provide a reasonable basis for
12 selecting a number that is 43 basis points above the midpoint of his range of growth
13 forecasts. Mr. Moul's arbitrary selection of a 5.50% growth rate overstates his DCF
14 results.

15
16 **Q. Beginning on page 26 of his Direct Testimony, Mr. Moul discussed differences in**
17 **financial risk between the capital structures of his electric group measured at book**
18 **value and market value. Please summarize Mr. Moul's assertion in this regard.**

19
20 A. Mr. Moul testified that since the market values of common stock for the companies in
21 his barometer group are greater than the book value of common stock, capital structure

1 ratios measured on book value have higher financial risk. Based on this allegation, Mr.
2 Moul added a “leverage adjustment” to both his DCF and CAPM cost of equity
3 estimates that increased his recommendations by 0.74%, or 74 basis points.

4
5 On page 27, Mr. Moul recognized that the Commission rejected this adjustment in Case
6 No. 2002-0016 and offered several reasons why the adjustment should not have been
7 rejected by the Commission.

8
9 **Q. Is Mr. Moul’s leverage adjustment reasonable?**

10
11 **A.** No. Mr. Moul’s leverage adjustment is still unreasonable and should still be rejected by
12 the Commission.

13
14 As I pointed out in Case No. 2002-0016, bond rating agencies and securities analysts do
15 not assess a utility company’s risk based on the market value of its capital structure, but
16 on the book value of its capital structure. It is reasonable to assume that investors assess
17 capital structure risk in the same manner. Mr. Moul provided absolutely no foundation
18 for his assertion that investors require higher returns when market values exceed book
19 values of common stock. This unfounded assertion should be categorically rejected.

1 Mr. Moul never addressed the issue of why current market values exceed book values of
2 common stock. There are a number of reasons why this situation may be occurring,
3 such as the relative safety of regulated utilities, investors' desires for dividend paying
4 stocks, and that perhaps investors expect utilities to earn more than their required cost of
5 capital. In any event, the appropriate measure for the investor required return on
6 common equity is the current stock price plus estimated growth. It is inappropriate for
7 Mr. Moul to inflate his DCF estimate by 74 basis points for so-called leverage risk that
8 does not exist.

9
10 **Q. Mr. Moul also added an adjustment for flotation costs to his DCF estimate. Please**
11 **comment on this adjustment.**

12
13 **A.** Mr. Moul's flotation cost adjustment should be rejected. Mr. Moul did not tie the equity
14 offerings in 2002 and 2003 by AEP to Kentucky Power's operations. Mr. Moul made no
15 showing that AEP's equity offerings had any effect on Kentucky Power's capital
16 structure or operations. Thus, it is inappropriate to increase the cost of equity by 21
17 basis points for flotation costs.

18
19 **Q. What would the results of Mr. Moul's DCF analysis be if you eliminated the**
20 **leverage adjustment, flotation cost adjustment, and used the midpoint of his**
21 **earnings growth forecasts?**

1

2 A. Using the formula provided by Mr. Moul on page 31, line 19 of his Direct Testimony,
3 his DCF result would be:

4

5 $4.08\% + 5.07\% = 9.15\%$

6

7 The revised DCF result of 9.15% is substantially less than Mr. Moul's recommendation
8 of 10.32%.

9

10 **Q., Beginning on page 32 of his Direct Testimony, Mr. Moul presented the results of an**
11 **alternative DCF analysis that, according to him, generally followed a procedure**
12 **outlined by the Federal Energy Regulatory Commission. His results ranged from**
13 **8.08% to 13.75% with a midpoint of 10.92%. Please comment on Mr. Moul's**
14 **analysis.**

15

16 A. Mr. Moul's use of a midpoint grossly overstated his alternative DCF results.

17

18 Exhibit No. PRM-1, Schedule 9 shows that the 13.75% result for Exelon Corp. is an
19 outlier. The vast majority of company results fall far below that number. Exhibit
20 ____ (RAB-7) presents the results of the DCF cost of equity for each company and the
21 average for the group using the low/high dividend yield for each of the two alternative

1 growth rate methods. The group average results range from 8.47% to 9.61%. The
2 average of all four results is 9.04%.

3
4 My analysis proves that using an unrepresentative value such as 13.75% renders Mr.
5 Moul's DCF midpoint meaningless. Taken as whole, the results of Mr. Moul's
6 alternative DCF analyses suggest a much lower number than 10.92%. In fact, these
7 results support a number closer to my recommendation of 9.35%.

8
9 I should also add that Mr. Moul further overstated his recommendation by adding a 99
10 basis point leverage adjustment and a flotation cost adjustment. These adjustments
11 should also be subtracted out of his alternative DCF recommendation.

12
13 I recommend that the Commission reject Mr. Moul's alternative DCF midpoint
14 recommendation.

1 **Risk Premium Analysis**

2
3 **Q. Please summarize Mr. Moul's risk premium analysis.**

4
5 A. Mr. Moul developed a risk premium cost of equity analysis using historical equity risk
6 premiums applied to a current corporate bond yield. Mr. Moul developed historical
7 equity risk premiums over several historical periods by comparing the historic returns on
8 the S&P Public Utility index to historic yields on utility bonds. Mr. Moul then added
9 these historic risk premiums to the forecasted yield on A-rated utility bonds to determine
10 his risk premium cost of equity of 11.46% including flotation costs.

11
12 **Q. Please respond to Mr. Moul's risk premium analysis.**

13
14 A. The problem with Mr. Moul's historical risk premium analysis is similar to the problem
15 with using historical earned returns in the CAPM analysis. This approach naively assumes
16 that earned returns and the resulting risk premiums in an historical period are reflective of
17 current investor expectations. For the reasons I stated earlier in my testimony, such an
18 assumption should be viewed with a good deal of caution. Given changing investor
19 expectations over time, it is risky to assume that investors base their current required
20 returns on an unchanging risk premium based on history. Finance literature has shown that
21 historical risk premiums can change over time. Although historical risk premiums may

1 provide rough guides to estimating current required returns, I believe that it is preferable to
2 place greater weight on DCF calculations that employ current, rather than historic data.
3

4 It should also be noted that the recent change in dividend taxation should reduce the
5 expected risk premium of stocks over bonds going forward, other things being equal. As I
6 stated earlier in my testimony, reduced taxation on dividends should lower the investor's
7 required pretax return on equity, other things being equal. Since there was no change in
8 the tax treatment of bond income, the required equity premium over bonds should decline
9 going forward. Thus, historical risk premiums could overstate the current required risk
10 premiums of utility stocks over bonds.
11

12 **Q. Do you agree with Mr. Moul's use of a forecast of an A-rated bond yield in his**
13 **calculation of his risk premium cost of equity?**

14
15 **A.** No. It is appropriate to use current interest rates rather than forecasted rates. This is
16 because current interest rates incorporate all information available in the marketplace,
17 including investor expectations on the course of future interest rates. Those expectations
18 carry some weight in terms of the price investors are currently willing to pay for bonds.
19 Interest rates may be forecasted to rise, but there is substantial uncertainty as to whether
20 or not those forecasts will ever come to pass. That uncertainty is discounted in current
21 bond prices and interest rates.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

In my view, if investors knew for a fact that utility bond yields were going to rise to the 6.50% level contained in Mr. Moul's analysis, then they already would have adjusted the prices they are currently willing to pay for those bonds and yields would quickly rise to 6.50%. That is because with certain knowledge, it is unlikely a rational investor today would knowingly accept a certain future capital loss and not discount the price of his or her utility bond. Thus, current bond yields are the best measure of investors' expectations of economic trends since they reflect all currently available market information.

CAPM Analysis

Q. Do you agree with Mr. Moul's CAPM analysis?

A. No. First, Mr. Moul utilized a levered beta that inflates the historical beta of his Electric Group. Second, Mr. Moul overstated the market return component of the CAPM. Both of these flaws lead to a serious overstatement of his CAPM results.

Q. Why is Mr. Moul's beta estimate incorrect?

1 A. The appropriate beta to use in the CAPM is one that investors expect based on a stock's
2 price movements relative to the overall market. Sources for these betas come from
3 published and widely recognized sources of investor information such as Value Line and
4 Merrill Lynch. However, Mr. Moul introduced a highly inappropriate adjustment based
5 on his claimed differences between market and book value capital structures for his
6 Electric Group.

7
8 Mr. Moul's claim that his leveraged beta should be used in the CAPM for ratemaking
9 purposes is incorrect and should be rejected by the Commission. Mr. Moul provided no
10 evidence that investors use his leverage adjustment to calculate their expected future
11 betas for the companies in his Electric Group. In my opinion, investors' expectations
12 will most likely be influenced by widely published sources of betas, not Mr. Moul's
13 calculations in this rate proceeding. Mr. Moul's leverage adjustment merely inflates his
14 CAPM result.

15
16 Finally, as I mentioned earlier in my testimony even the use of published betas may
17 overstate the CAPM results at this time.

18
19 **Q. Do you agree with Mr. Moul's use of a forecast for the risk-free rate in his CAPM**
20 **analysis?**

21

1 A. No. For the reasons I explained in my response to his Risk Premium analyses, it is
2 inappropriate to use forecasted interest rates in the calculation of the CAPM return on
3 equity. Mr. Moul's use of a forecasted yield on the 20-year Treasury bond inflates his
4 CAPM return by about 86 basis points, or 0.86%.

5

6 **Comparable Earnings**

7

8 **Q. Does Mr. Moul's cost of equity estimate based on comparable earnings provide a**
9 **sound basis on which to estimate the cost of equity for Kentucky Power?**

10

11 A. No. Mr. Moul's comparable earnings method should be rejected.

12

13 **Q. Please explain why Mr. Moul's comparable earnings approach should be rejected.**

14

15 A. There are several reasons why Mr. Moul's comparable earnings approach should be
16 rejected.

17

18 First, book returns for unregulated companies are an inappropriate means to measure the
19 cost of equity for a regulated utility company such as Kentucky Power. The Company
20 enjoys a protected service territory that has no competition from outside firms. This means
21 that investors will require a lower return on equity for a regulated monopoly such as

1 Kentucky Power compared to unregulated firms that must compete for their customers'
2 business. Using book returns for unregulated companies vastly overstates the required
3 return for Kentucky Power's regulated utility operations.

4
5 Second, Mr. Moul used an arbitrarily determined time period over which to calculate
6 realized returns for his analysis (five years historical and five years projected). Such a
7 short historical time period as five years may not be representative of long-term investor
8 expectations regarding returns. Further, historical returns do not necessarily have anything
9 to do with expected returns, which are based on today's economic conditions and
10 expectations of future conditions.

11

12 **Q. Does this conclude your direct testimony?**

13

14 **A. Yes.**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

GENERAL ADJUSTMENTS IN)	
ELECTRIC RATES OF)	CASE NO.
KENTUCKY POWER COMPANY)	2005-00341

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

**J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA
JANUARY 2006**

RESUME OF RICHARD A. BAUDINO, DIRECTOR OF CONSULTING

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Twenty two years of experience in utility ratemaking. Broad based experience in revenue requirement analysis, cost of capital, utility financing, phase-ins, auditing and rate design. Has designed revenue requirement and rate design analysis programs.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Electric and Gas Utility Rate Design
Cost of Capital for Electric, Gas and Water Companies
Ratemaking Treatment of Generating Plant Sale/Leasebacks
Electric and Gas Utility Cost of Service
Revenue Requirements
Gas industry restructuring and competition
Fuel cost auditing

RESUME OF RICHARD A. BAUDINO, DIRECTOR OF CONSULTING

EXPERIENCE

1989 to

Present: Kennedy and Associates: **Director of Consulting** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, gas industry restructuring and competition.

1982 to

1989: New Mexico Public Service Commission Staff: **Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Industrial Groups

Ad Hoc Committee for a Competitive
Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
Armco Steel Company, L.P.
Association of Business Advocating
Tariff Equity
Climax Molybdenum Company
General Electric Company
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Industrial Group
Occidental Chemical
PSI Industrial Group

Taconite Intervenors (Minnesota)
Tyson Foods

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdict.	Party	Utility	Subject
3/83	1780	NM	New Mexico Public Service Commission	Boles Water Co.	Rate design, rate of return.
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop	Rate design.
11/84	1833	NM	New Mexico Public Service Commission	El Paso Electric Co.	Service contract approval, rate design, performance standards for Palo Verde nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/84	1907	NM	New Mexico Public Service Commission	Jomada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
10/88	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Amco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Evaluation of cost allocation, rate design, rate plan, and carrying charge proposals.
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035- E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.
8/94	8652	MD	Westvaco Corp.	Potomac Edison Co.	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343- 000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
8/95	95-254-TF U-2811	AR	Tyson Foods, inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co., Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
1/97	RP96-199- 000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania- American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
7/98	R-00984280	PA	PG Energy, Inc.	PGE Industrial Intervenors	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro- Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Cost of debt.
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity assignment.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
01/00	8829	MD	Maryland Industrial Gr. & United States	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Comm.	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.
11/01	U-25687	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Return on equity.

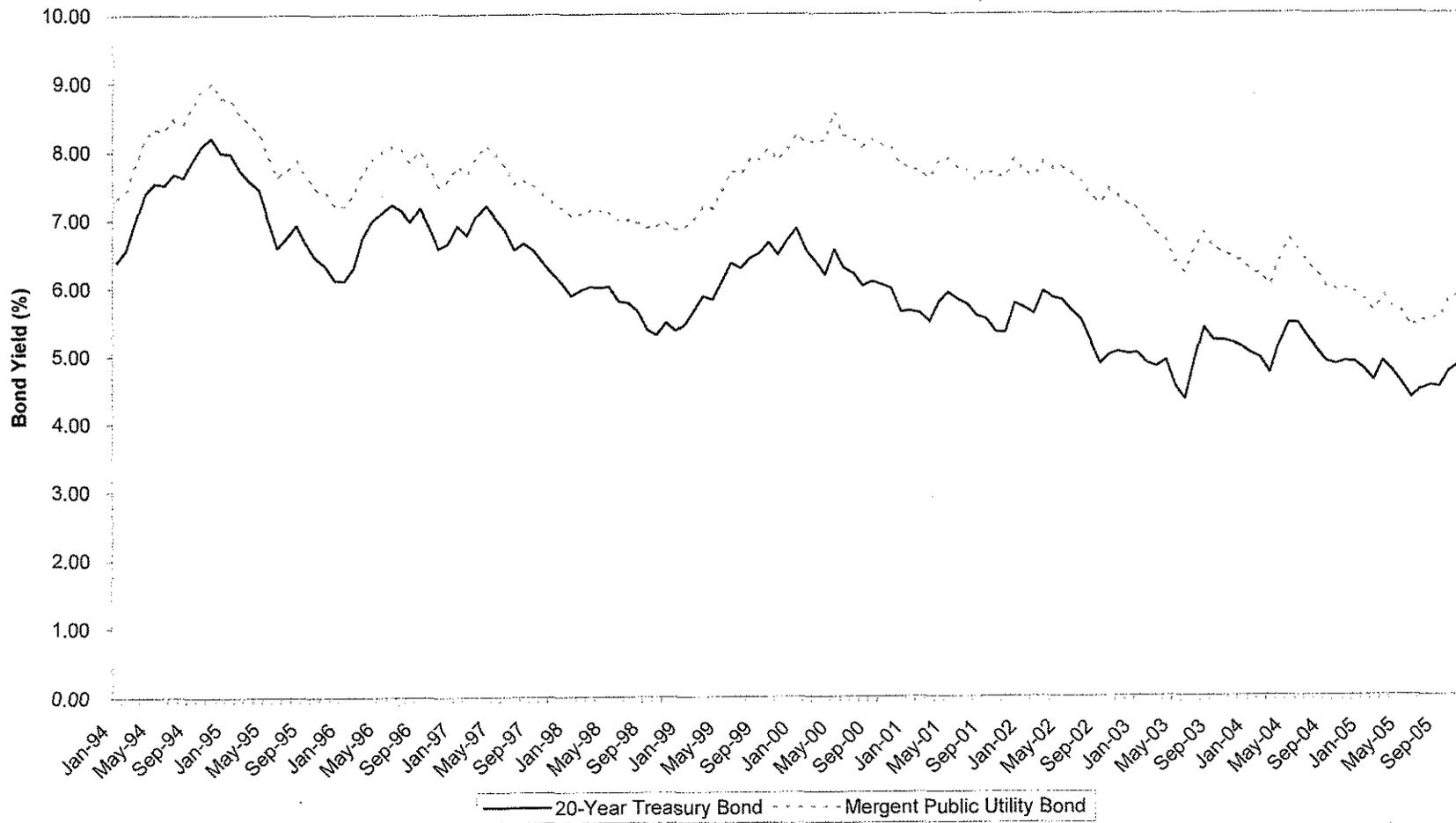
**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdct.	Party	Utility	Subject
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	ER03-583-000, et. al.	FERC	Louisiana Public Service Commission	Entergy Corp.	Return on Equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HealthCare Assoc.	Florida Power & Light Co.	Review Requirements, Rate Design, Cost Allocation.

**Expert Testimony Appearances
of
Richard A. Baudino
As of July 2005**

Date	Case	Jurisdic.	Party	Utility	Subject
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric	Revenue requirement, cost allocation, rate design, tariff issues

HISTORICAL BOND YIELDS AVERAGE PUBLIC UTILITY BOND VS 20-YEAR TREASURY BOND



**KENTUCKY POWER
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

		Dec '05	Nov '05	Oct '05	Sept '05	Aug '05	July '05
Avista Corp.	High Price (\$)	18.84	17.96	19.55	20.20	19.61	19.36
	Low Price (\$)	17.47	16.76	17.01	18.11	17.90	18.10
	Avg. Price (\$)	18.16	17.36	18.28	19.16	18.76	18.73
	Dividend (\$)	0.140	0.140	0.135	0.135	0.135	0.135
	Mo. Avg. Div.	3.08%	3.23%	2.95%	2.82%	2.88%	2.88%
	6 mos. Avg.	2.97%					
Cleco Corporation	High Price (\$)	22.29	22.98	24.36	23.96	23.52	22.58
	Low Price (\$)	19.00	20.64	20.56	22.10	21.65	21.00
	Avg. Price (\$)	20.65	21.81	22.46	23.03	22.59	21.79
	Dividend (\$)	0.225	0.225	0.225	0.225	0.225	0.225
	Mo. Avg. Div.	4.36%	4.13%	4.01%	3.91%	3.98%	4.13%
	6 mos. Avg.	4.09%					
DPL, Inc.	High Price (\$)	26.40	26.85	28.19	27.95	28.34	27.97
	Low Price (\$)	25.10	25.29	24.33	26.73	26.43	26.85
	Avg. Price (\$)	25.75	26.07	26.26	27.34	27.39	27.41
	Dividend (\$)	0.240	0.240	0.240	0.240	0.240	0.240
	Mo. Avg. Div.	3.73%	3.68%	3.66%	3.51%	3.51%	3.50%
	6 mos. Avg.	3.60%					
Duquesne Light Holdings	High Price (\$)	17.34	17.35	17.59	18.42	19.52	19.41
	Low Price (\$)	16.21	16.10	16.08	17.06	17.57	18.47
	Avg. Price (\$)	16.78	16.73	16.84	17.74	18.55	18.94
	Dividend (\$)	0.250	0.250	0.250	0.250	0.250	0.250
	Mo. Avg. Div.	5.96%	5.98%	5.94%	5.64%	5.39%	5.28%
	6 mos. Avg.	5.70%					
Empire District	High Price (\$)	21.25	21.07	23.27	24.16	24.41	25.01
	Low Price (\$)	20.32	20.01	19.25	22.49	22.30	23.57
	Avg. Price (\$)	20.79	20.54	21.26	23.33	23.36	24.29
	Dividend (\$)	0.320	0.320	0.320	0.320	0.320	0.320
	Mo. Avg. Div.	6.16%	6.23%	6.02%	5.49%	5.48%	5.27%
	6 mos. Avg.	5.77%					
Energy East	High Price (\$)	23.88	24.20	25.95	26.69	27.92	29.35
	Low Price (\$)	22.60	22.50	22.80	24.82	25.65	27.20
	Avg. Price (\$)	23.24	23.35	24.38	25.76	26.79	28.28
	Dividend (\$)	0.290	0.290	0.290	0.275	0.275	0.275
	Mo. Avg. Div.	4.99%	4.97%	4.76%	4.27%	4.11%	3.89%
	6 mos. Avg.	4.50%					
First Energy Corporation	High Price (\$)	50.07	47.67	53.36	53.00	51.11	50.45
	Low Price (\$)	46.73	45.78	45.94	50.35	48.41	47.46
	Avg. Price (\$)	48.40	46.73	49.65	51.68	49.76	48.96
	Dividend (\$)	0.430	0.430	0.430	0.430	0.413	0.413
	Mo. Avg. Div.	3.55%	3.68%	3.46%	3.33%	3.32%	3.37%
	6 mos. Avg.	3.45%					

**KENTUCKY POWER
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

		Dec '05	Nov '05	Oct '05	Sept '05	Aug '05	July '05
Green Mountain Power	High Price (\$)	30.90	32.65	33.09	33.03	30.75	30.00
	Low Price (\$)	26.62	28.74	31.90	30.50	28.75	29.10
	Avg. Price (\$)	28.76	30.70	32.50	31.77	29.75	29.55
	Dividend (\$)	0.250	0.250	0.250	0.250	0.250	0.250
	Mo. Avg. Div.	3.48%	3.26%	3.08%	3.15%	3.36%	3.38%
	6 mos. Avg.	3.28%					
Hawaiian Electric Ind.	High Price (\$)	26.72	26.90	28.50	28.76	27.81	27.77
	Low Price (\$)	25.65	25.50	25.50	26.38	26.21	26.51
	Avg. Price (\$)	26.19	26.20	27.00	27.57	27.01	27.14
	Dividend (\$)	0.310	0.310	0.310	0.310	0.310	0.310
	Mo. Avg. Div.	4.74%	4.73%	4.59%	4.50%	4.59%	4.57%
	6 mos. Avg.	4.62%					
Northeast Utilities	High Price (\$)	20.25	19.03	20.20	20.48	21.95	21.74
	Low Price (\$)	18.42	17.30	17.62	19.35	19.52	20.41
	Avg. Price (\$)	19.34	18.17	18.91	19.92	20.74	21.08
	Dividend (\$)	0.175	0.175	0.175	0.175	0.175	0.175
	Mo. Avg. Div.	3.62%	3.85%	3.70%	3.51%	3.38%	3.32%
	6 mos. Avg.	3.56%					
Pinnacle West	High Price (\$)	43.33	42.19	44.97	46.06	46.68	46.16
	Low Price (\$)	41.05	39.91	39.81	43.13	43.22	43.76
	Avg. Price (\$)	42.19	41.05	42.39	44.60	44.95	44.96
	Dividend (\$)	0.500	0.500	0.500	0.475	0.475	0.475
	Mo. Avg. Div.	4.74%	4.87%	4.72%	4.26%	4.23%	4.23%
	6 mos. Avg.	4.51%					
PNM Resources	High Price (\$)	26.19	26.26	29.22	29.98	30.45	29.85
	Low Price (\$)	24.15	24.03	24.07	27.62	27.90	28.24
	Avg. Price (\$)	25.17	25.15	26.65	28.80	29.18	29.05
	Dividend (\$)	0.200	0.200	0.200	0.200	0.200	0.200
	Mo. Avg. Div.	3.18%	3.18%	3.00%	2.78%	2.74%	2.75%
	6 mos. Avg.	2.94%					
PPL Corp.	High Price (\$)	30.90	31.14	33.68	33.51	65.12	62.14
	Low Price (\$)	28.59	28.25	29.01	31.55	61.62	59.50
	Avg. Price (\$)	29.75	29.70	31.35	32.53	63.37	60.82
	Dividend (\$)	0.250	0.250	0.250	0.250	0.460	0.460
	Mo. Avg. Div.	3.36%	3.37%	3.19%	3.07%	2.90%	3.03%
	6 mos. Avg.	3.15%					
Progress Energy	High Price (\$)	45.20	45.50	45.14	45.00	45.00	46.00
	Low Price (\$)	43.39	42.62	40.77	43.03	41.90	43.80
	Avg. Price (\$)	44.30	44.06	42.96	44.02	43.45	44.90
	Dividend (\$)	0.590	0.590	0.590	0.590	0.590	0.590
	Mo. Avg. Div.	5.33%	5.36%	5.49%	5.36%	5.43%	5.26%
	6 mos. Avg.	5.37%					

**KENTUCKY POWER
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

		Dec '05	Nov '05	Oct '05	Sept '05	Aug '05	July '05
Puget Energy	High Price (\$)	20.90	21.33	23.70	23.82	23.54	24.36
	Low Price (\$)	20.21	20.26	20.50	22.40	22.05	23.26
	Avg. Price (\$)	20.56	20.80	22.10	23.11	22.80	23.81
	Dividend (\$)	0.250	0.250	0.250	0.250	0.250	0.250
	Mo. Avg. Div.	4.86%	4.81%	4.52%	4.33%	4.39%	4.20%
	6 mos. Avg.	4.52%					
UniSource Energy Corp.	High Price (\$)	32.86	32.78	33.86	33.92	33.60	32.70
	Low Price (\$)	30.80	30.39	29.86	31.80	31.19	30.50
	Avg. Price (\$)	31.83	31.59	31.86	32.86	32.40	31.60
	Dividend (\$)	0.190	0.190	0.190	0.190	0.190	0.190
	Mo. Avg. Div.	2.39%	2.41%	2.39%	2.31%	2.35%	2.41%
	6 mos. Avg.	2.37%					
Average Dividend Yield		4.03%					

Source: Yahoo! Finance, S&P Stock Guide

**KENTUCKY POWER
COMPARISON GROUP
DCF Growth Rate Analysis**

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Value Line B x R	(4) First Call/ Thomson	(5) Zacks
Avista Corp.	6.13%	10.89%	4.27%	5.50%	5.00%
Cleco Corporation	0.00%	1.56%	3.00%	4.65%	4.00%
DPL, Inc.	0.82%	1.25%	4.04%	4.67%	5.00%
Duquesne Light Holdings	0.00%	3.23%	3.57%	2.50%	5.00%
Empire District Electric	0.00%	5.09%	1.32%	2.00%	5.00%
Energy East Corporation	4.96%	4.72%	3.25%	4.50%	5.00%
FirstEnergy Corporation	6.96%	9.98%	5.46%	5.00%	5.00%
Green Mountain Power	10.96%	3.24%	3.96%	N/A	N/A
Hawaiian Electric Industries	0.00%	2.38%	3.06%	3.70%	4.00%
Northeast Utilities	9.01%	10.87%	5.15%	7.70%	8.00%
Pinnacle West Capital Corp.	4.95%	3.35%	2.11%	6.00%	6.00%
PNM Resources	11.59%	7.23%	3.29%	10.66%	8.00%
PPL Corporation	8.80%	6.12%	7.50%	7.44%	7.00%
Progress Energy Inc.	1.51%	-0.24%	2.65%	3.92%	4.00%
Puget Energy	2.29%	5.63%	3.24%	4.00%	5.00%
UniSource Energy Corp.	9.34%	5.55%	3.15%	N/A	N/A
Averages Excluding Negative Values	4.83%	5.41%	3.69%	5.16%	5.43%

Sources: Zacks Analysts' Forecasts, December 2005
Value Line Investment Survey, November 11, December 2 & December 30, 2005
First Call/Thomson Earnings Forecasts, December 2005

Value Line Projected Dividend Per Share Growth

Company	2004 DPS	Projected DPS	Compound Growth Rate
Avista Corp.	\$ 0.52	\$ 0.70	6.13%
Cleco Corporation	\$ 0.90	\$ 0.90	0.00%
DPL, Inc.	\$ 0.96	\$ 1.00	0.82%
Duquesne Light Holdings	\$ 1.00	\$ 1.00	0.00%
Empire District Electric	\$ 1.28	\$ 1.28	0.00%
Energy East Corporation	\$ 1.06	\$ 1.35	4.96%
FirstEnergy Corporation	\$ 1.50	\$ 2.10	6.96%
Green Mountain Power	\$ 0.88	\$ 1.48	10.96%
Hawaiian Electric Industries	\$ 1.24	\$ 1.24	0.00%
Northeast Utilities	\$ 0.63	\$ 0.97	9.01%
Pinnacle West Capital Corp.	\$ 1.83	\$ 2.33	4.95%
PNM Resources	\$ 0.63	\$ 1.09	11.59%
PPL Corporation	\$ 0.82	\$ 1.25	8.80%
Progress Energy Inc.	\$ 2.32	\$ 2.50	1.51%
Puget Energy	\$ 1.00	\$ 1.12	2.29%
UniSource Energy Corp.	\$ 0.64	\$ 1.00	9.34%
Average			4.83%

**KENTUCKY POWER
COMPARISON GROUP
DCF Growth Rate Analysis**

Value Line Projected Earnings Per Share Growth

Company	3-Year Avg. EPS	Projected EPS	Compound Growth Rate
Avista Corp.	\$ 0.81	\$ 1.50	10.89%
Cleco Corporation	\$ 1.37	\$ 1.50	1.56%
DPL, Inc.	\$ 1.21	\$ 1.30	1.25%
Duquesne Light Holdings	\$ 1.16	\$ 1.40	3.23%
Empire District Electric	\$ 1.11	\$ 1.50	5.09%
Energy East Corporation	\$ 1.52	\$ 2.00	4.72%
FirstEnergy Corporation	\$ 2.26	\$ 4.00	9.98%
Green Mountain Power	\$ 2.02	\$ 2.45	3.24%
Hawaiian Electric Industries	\$ 1.52	\$ 1.75	2.38%
Northeast Utilities	\$ 1.08	\$ 2.00	10.87%
Pinnacle West Capital Corp.	\$ 2.54	\$ 3.10	3.35%
PNM Resources	\$ 1.22	\$ 1.85	7.23%
PPL Corporation	\$ 1.75	\$ 2.50	6.12%
Progress Energy Inc.	\$ 3.45	\$ 3.40	-0.24%
Puget Energy	\$ 1.26	\$ 1.75	5.63%
UniSource Energy Corp.	\$ 1.19	\$ 1.65	5.55%
Average			5.05%

Sustainable Growth Calculation

Company	Forecasted Payout Ratio	Forecasted Retention Ratio	Expected Return	Growth Rate
Avista Corp.	46.67%	53.33%	8.00%	4.27%
Cleco Corporation	60.00%	40.00%	7.50%	3.00%
DPL, Inc.	76.92%	23.08%	17.50%	4.04%
Duquesne Light Holdings	71.43%	28.57%	12.50%	3.57%
Empire District Electric	85.33%	14.67%	9.00%	1.32%
Energy East Corporation	67.50%	32.50%	10.00%	3.25%
FirstEnergy Corporation	52.50%	47.50%	11.50%	5.46%
Green Mountain Power	60.41%	39.59%	10.00%	3.96%
Hawaiian Electric Industries	70.86%	29.14%	10.50%	3.06%
Northeast Utilities	48.50%	51.50%	10.00%	5.15%
Pinnacle West Capital Corp.	75.16%	24.84%	8.50%	2.11%
PNM Resources	58.92%	41.08%	8.00%	3.29%
PPL Corporation	50.00%	50.00%	15.00%	7.50%
Progress Energy Inc.	73.53%	26.47%	10.00%	2.65%
Puget Energy	64.00%	36.00%	9.00%	3.24%
UniSource Energy Corp.	60.61%	39.39%	8.00%	3.15%
Average	63.90%	36.10%	10.31%	3.69%

**KENTUCKY POWER
COMPARISON GROUP
DCF Growth Rate Analysis**

RETURN ON EQUITY CALCULATION COMPARISON GROUP					
	(1) Value Line <u>Dividend Gr.</u>	(2) Value Line <u>Earnings Gr.</u>	(3) First Call/ <u>Thomson</u>	(4) Zack's <u>Earning Gr.</u>	(5) Average of <u>All Gr. Rates</u>
Dividend Yield	4.03%	4.03%	4.03%	4.03%	4.03%
Growth Rate	4.83%	5.41%	5.16%	5.43%	5.21%
Expected Div. Yield	<u>4.12%</u>	<u>4.13%</u>	<u>4.13%</u>	<u>4.14%</u>	<u>4.13%</u>
DCF Return on Equity	8.95%	9.54%	9.29%	9.57%	9.34%

KENTUCKY POWER
Capital Asset Pricing Model Analysis
Comparison Group
20-Year Treasury Bond

<u>Line No.</u>		<u>Value Line</u>
1	Market Required Return Estimate	
2	Expected Dividend Yield	1.29%
3	Expected Growth	<u>12.84%</u>
4	Required Return	14.13%
5	Risk-free Rate of Return, 20-Year Treasury Bond	
6	Average of Last Six Months	4.64%
8	Risk Premium	
9	@ 6 Month Average RFR (Line 4 minus Line 6)	9.49%
10	Comparison Group Beta	0.83
11	Comparison Group Beta * Risk Premium	
12	@ 6 Month Average RFR (Line 10 * Line 9)	7.92%
13	CAPM Return on Equity	
14	@ 6 Month Average RFR (Line 12 plus Line 6)	12.56%

5-Year Treasury Bond

1	Market Required Return Estimate	
2	Expected Dividend Yield	1.29%
3	Expected Growth	<u>12.84%</u>
4	Required Return	14.13%
5	Risk-free Rate of Return, 5-Year Treasury Bond	
6	Average of Last Six Months	4.21%
8	Risk Premium	
9	@ 6 Month Average RFR (Line 4 minus Line 6)	9.92%
10	Comparison Group Beta	0.83
11	Comparison Group Beta * Risk Premium	
12	@ 6 Month Average RFR (Line 9 * Line 10)	8.28%
13	CAPM Return on Equity	
14	@ 6 Month Average RFR (Line 12 plus Line 6)	12.49%

**KENTUCKY POWER
Capital Asset Pricing Model Analysis
Comparison Group**

Supporting Data for CAPM Analyses

20 Year Treasury Bond Data

	<u>Avg. Yield</u>
July-05	4.48%
August-05	4.53%
September-05	4.51%
October-05	4.74%
November-05	4.83%
December-05	<u>4.73%</u>
6 month average	4.64%

5 Year Treasury Bond Data

	<u>Avg. Yield</u>
July-05	3.98%
August-05	4.12%
September-05	4.01%
October-05	4.33%
November-05	4.45%
December-05	<u>4.39%</u>
6 month average	4.21%

Value Screen III Growth Rate Data:

Forecasted Data:	
Earnings	15.84%
Book Value	11.18%
Dividends	<u>11.51%</u>
Average	12.84%
Source: Value Line Investment Survey for Windows, December 2005	

Value Line Betas
Comparison Group:

Avista Corp.	0.90
Cleco Corporation	1.15
DPL, Inc.	1.00
Duquesne Light Holdings	0.80
Empire District Electric	0.70
Energy East Corporation	0.85
FirstEnergy Corporation	0.75
Green Mountain Power	0.60
Hawaiian Electric Industries	0.70
Northeast Utilities	0.80
Pinnacle West Capital Corp.	0.90
PNM Resources	0.90
PPL Corporation	1.00
Progress Energy Inc.	0.85
Puget Energy	0.80
UniSource Energy Corp.	0.65
Average	0.83

Source: Value Line Investment Reports

KENTUCKY POWER
Capital Asset Pricing Model Analysis

Historic Market Premium

	<u>Geometric Mean</u>	<u>Arithmetic Mean</u>
Long-Term Annual Return on Stocks	10.40%	12.40%
Long-Term Annual Income Return on Long-Term Government Bonds	<u>5.20%</u>	<u>5.20%</u>
Historical Market Risk Premium	5.20%	7.20%
Comparison Group Beta	<u>0.83</u>	<u>0.83</u>
Beta * Market Premium	4.34%	6.01%
Current 20-Year Treasury Bond Yield	<u>4.64%</u>	<u>4.64%</u>
CAPM Cost of Equity	8.98%	10.64%

Source: *Stocks, Bonds, Bills, and Inflation 2005 Yearbook*, Ibbotson Associates

MR. MOUL'S ALTERNATIVE DCF ANALYSIS
Average of All DCF Results

	Retention Growth		IBES/First Call	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
Ameren Corp.	7.08%	7.37%	8.26%	8.55%
DTE Energy	9.35%	9.60%	8.73%	8.98%
Exelon Corp.	13.44%	13.75%	8.71%	9.01%
FirstEnergy Corp.	9.35%	9.62%	8.08%	8.35%
MGE Energy	7.51%	7.91%		
Vectren Corp.	8.31%	8.58%	8.32%	8.59%
WPS Resources	10.78%	11.04%	8.49%	8.75%
Wisconsin Energy	8.90%	9.04%	8.70%	8.84%
Averages	9.34%	9.61%	8.47%	8.72%